



Firmware

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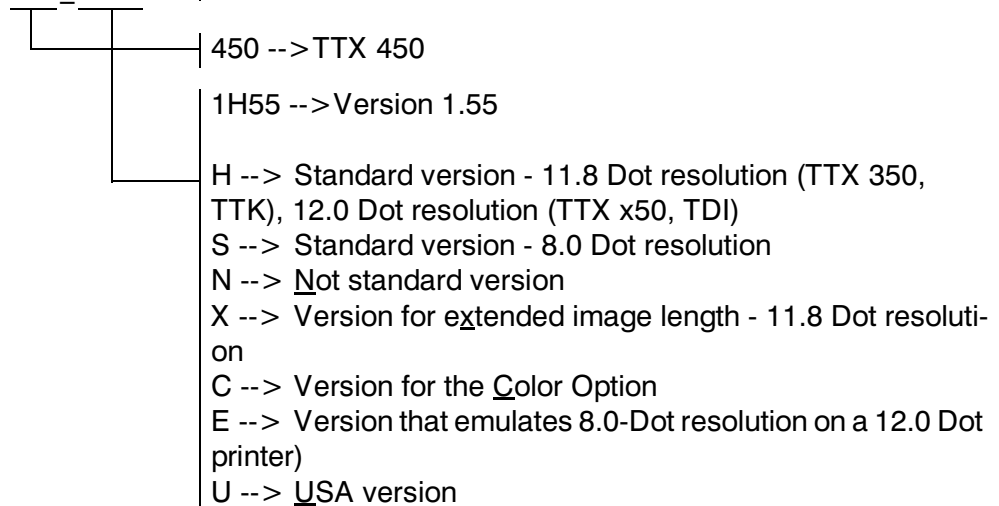
Firmware Download

Firmware Versions

The firmware file designations bear some useful information about the firmware version:

Example:

450_1H55.BAT



Tab. 1: Version information, hidden in the file designation.

Current firmware from the Web

First of all, get the firmware files. The current version can be drawn from the following website:

<http://www.machines.averydennison.com>

Proceed as follows to download the files:

1. Call the above mentioned website.
 2. Click on the property page „Download“.
 3. Move the mouse to the top margin of the property page „Download“ and click on „Firmware“.
 4. Choose the Firmware appropriate for your printer from the list and click on it.
- Your browser starts downloading.

General notes about loading firmware

Flash-ROM

All printers listed at the top end of this page are equipped with programmable memory devices (Flash-ROM). The Flash-ROM stores firmware and internal fonts of the printer.

Updating the printer firmware doesn't require opening the printer. The new firmware is copied via parallel interface LPT1 to the Flash-ROM.

➡ Firmware transfer can only be performed via parallel interface!

Firmware transfer can be performed in MS-DOS mode or - under Windows - by means of the Download Assistant (see section [Loading firmware using the Download Assistant](#) on page 5).

➡ Don't use the MS-DOS window under Windows!

MS-DOS mode

There are two possibilities to get into the MS-DOS mode:

- Starting from Windows 95 by clicking the button sequence START / SHUT DOWN / RESTART COMPUTER IN MS-DOS-MODE.
- Pressing the F8-key shortly after switching on the computer.

By means of the last-mentioned way, the download process works fine without the setting described below. The first sign of the starting Windows 95 is the text line „Starting Windows 95...“ showing up in the upper left corner of the screen. Press the F8-key right in that moment and select „6. MS-DOS prompt“ from the selection list. The computer starts then in MS-DOS mode.

➡ If you choose the method „Starting from Windows 95...“ you must - imperative! - alter the setting as described below. Otherwise, the firmware download cannot be properly processed:

Setting!

1. Click START / SETTINGS / PRINTERS. Click with the right mouse button on a local installed printer.
2. Click PROPERTIES in the property menu. A window opens.
3. Choose property page DETAILS.
4. Click the PORT SETTINGS button. A selection box opens ([Fig. 1](#)).

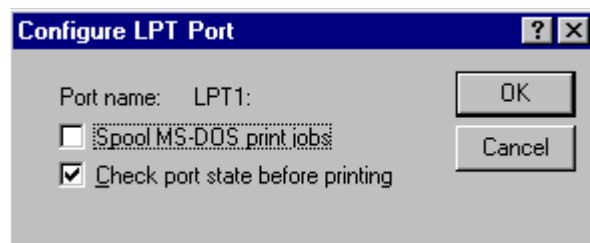


Fig. 1: CAUTION! - Make sure, that the upper selection field („Spool MS-DOS print jobs“) is not selected.

5. Make sure, that the upper selection field („Spool MS-DOS print jobs“) is not selected. Click OK.

Loading Firmware

Proceed as follows to load firmware:

6. Start the archiv file (Tab. 2). The files contained in it will become extracted to a directory of your choice.
7. Change to the Windows MS-DOS mode, as described in paragraph [General notes about loading firmware](#) on page 3.
8. Start the Batch file (Tab. 2) contained in the extraction directory. All firmware files are now copied to the printer automatically, using the parallel interface.

■➔ Don't use the MS-DOS window to start the batch file!

After a successful firmware loading, status report ST01 shows up on the display.

9. Acknowledge the status report by pressing the ON/OFF button.

In case of .LDR being permanently displayed instead of ST01, switch the printer off for approx. 30 s. Then turn it on again.

If after turning on the printer doesn't bring ST01 to display, perform a factory reset:

➔ Select OTHR/ FACT in the printer parameter menu.

Printer type	Batch file	Self-extracting archiv file
TTX 350 / Ocelot (11,8 Dot)	350_xHxx.BAT	350_xHxx.EXE*
TTX 350 / Ocelot (8,0 Dot)	350_xSxx.BAT	350_xSxx.EXE*
TTX 450 / Puma	450_xHxx.BAT	450_xHxx.EXE
TTX 650 / Lion	650_xHxx.BAT	650_xHxx.EXE
TTX 674 / Puma plus	450_xHxx.BAT	450_xHxx.EXE
TTX 675 / Lion plus	650_xHxx.BAT	650_xHxx.EXE
TTX 950 / Tiger	950_xHxx.BAT	950_xHxx.EXE
TTX 1050 / Tiger XXL	105_xXxx.BAT	105_xXxx.EXE
TDI / XXtreme	TDI_xHxx.BAT	TDI_xHxx.EXE
TTK / Texxtile (11,8 Dot)	TTK_xHxx.BAT	TTK_xHxx.EXE**
TTK / Texxtile (8,0 Dot)	TTK_xSxx.BAT	TTK_xSxx.EXE**

Tab. 2: Start the appropriate batch file belonging to your printer type to install the firmware (The crosses replace the version no., e.g. 1H57)

*) From firmware version 1.13 on

**) From firmware version 1.20 on

Loading firmware using the Download Assistant

The Download Assistant is a utility program for comfortable downloading of printer firmware from PCs, using a Windows operating system.

- ➡ With the assistance of the utility program, the operating system has not to be switched to MS-DOS mode before starting the download.

System requirements

PC

The program can only be used with a PC running under one of the following operating systems: Windows 95, Windows 98, Windows NT 4.0, Windows 2000 or Windows ME

The PC must be equipped with a serial or parallel interface.

Printer types

All types listed in the header line of this document with one exception:

- ➡ The Download Assistant can only then be applied to printers of the types TTX 350/Ocelot, if the device is equipped with a loader of version 3.0 or higher. The loader version is displayed shortly after powering on the printer.

Installation

Start the setup program „SetupFirmwareDownload.exe“. The program can be found on the Documentation-CD, in folder „Utilities“.

Fig. 1: First, you will be asked, if you want to install the program „FirmwareDownload“ now. Click „Ja“.

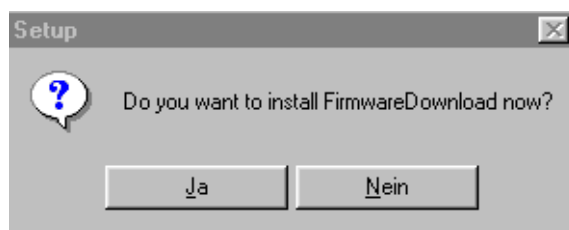
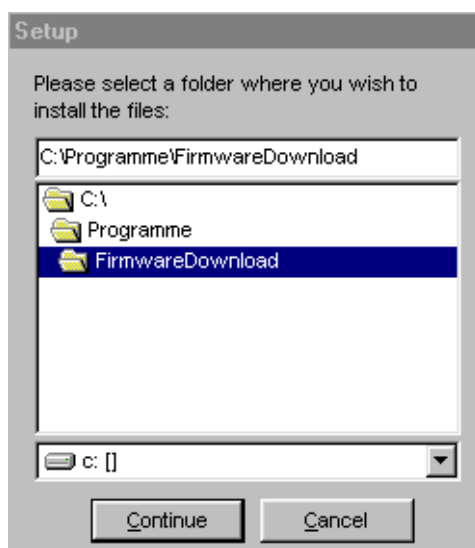


Fig. 2: A file selection window opens. Choose a directory, to which the program should be copied.



Starting the program

1. The setup program places an icon on the Windows desktop (see Fig. 3). Click on the icon to start the program. The program window opens (see Fig. 4)

Fig. 3: Click on this icon to start the program.



2. Click on „Choose Dir“. A file selection window appears. Open the folder which contains the firmware files and click on the file „System.bat“. The so marked file appears in the left half of the program window (see Fig. 4).

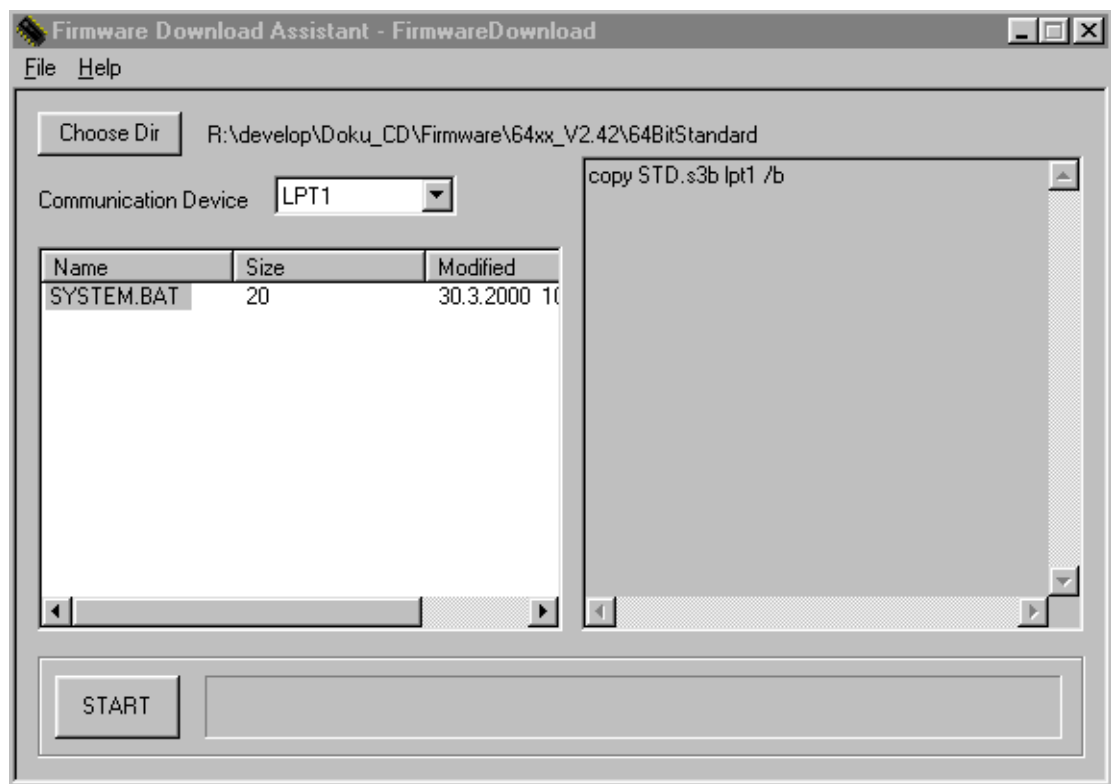


Fig. 4: Program window of „FirmwareDownload“ - here you can select the appropriate batch file and start the download process.

3. Open the list „Communication Device“ to select a parallel interface (e.g. LPT1).
 - ➡ The appropriate interface must be selected at the printer (printer parameter INTERF. PARAM./Interface)!
 4. Click on the batch file in the left part of the program window (see Fig. 4). The command lines contained in the batch file now appear in the right part.
 5. Click „Start“ to start the download process.
- After a successful firmware loading, status report ST01 shows up on the printer display.
6. Acknowledge the status report by pressing the ON/OFF button.

In case of .LDR being permanently displayed instead of ST01, switch the printer off for approx. 30 s. Then turn it on again.

If after turning on the printer doesn't bring ST01 to display, perform a factory reset:

➔ Select OTHR/ FACT in the printer parameter menu.

Loader download

- This chapter doesn't apply to printers of the types TTX 350/Ocelot! Beginning with loader version 3.0 (see Tab. 3), the loader for TTX 350/Ocelot differs from the loader for all other printers listed in the header of this page. Updating the loader for TTX 350/Ocelot may only be tackled by experienced Service Technicians.
- For instructions refer to release no. F991.

General information

What is a Loader?

The empty Flash-ROMs are prepared ex works with a simple basic program (loader) which controls the first download of firmware. This firmware download overwrites the loader (mostly V1.0) with a newer version which is matching the firmware version. The loader coordinates data transmission and places the incoming new program parts.

Loader Versions

After turning on the printer, the installed loader version is being displayed for approx. 2 s:

Display	Loader	Features	Date
No display	Version 1.0	Elderly loader with a significant disadvantage: the loader mode can not be provoked by pressing a certain button combination (as with version 2.0). CAUTION! - In case of a download failure, the Flash-ROMs have to be exchanged!	
V2.0*	Version 2.0	The loader mode can be „forced“ by pressing a certain button combination (refer to section Forcing .LDR on page 9 for details).	12/99
V2.1	Version 2.1**	Only for TTX 350 / Ocelot. Same features as with loader 2.0.	12/99
V3.0	Version 3.0	Version, matching some architectural modifications of newer Flash-ROMs (refer to paragraph Special features of loader version 3.0 and above on page 9).	7/00
V4.0	Version 4.0	To avoid compatibility problems between firmware and loader, this loader version can not be overwritten by a „younger“ version.	12/00

Tab. 3: Shortly after switching the printer on, the installed loader version is displayed.

Display	Loader	Features	Date
V4.1	Version 4.1	Problems corrected which occurred when downloading firmware via Centronics interface.	8/01

Tab. 3: Shortly after switching the printer on, the installed loader version is displayed.

*) TTX 350: no display

**) only with TTX 350

Forcing .LDR

The loader mode can either be started by transferring the file START.LDR (contained in all batch files), or can be forced by using the following button combination:

- Keep the FEED+ON/OFF button pressed, while powering the printer on.

Special features of loader version 3.0 and above

The loader 3.0 as well as the following versions match some architectural modifications of some of the applied Flash-ROMs. Furthermore, those versions load the firmware more reliably as the preceding version 2.0. However, they only support the following Flash-ROM types:

Flash-ROMs

Manufacturer	Flash-ROM
ATMEL	AT29C040
ATMEL	AT29C040A
AMD	AM29F040B

Tab. 4: Flash-ROM types supported by loader 3.0

Please note the following advices before performing any loader update:



AMD AM29F040B Flash-ROM:

- Printers equipped with those Flash-ROM types may only be updated with the complete firmware including fonts!



(Why? --> A special feature of those devices is to erase the Flash-ROM completely when being switched into the loader mode (that is when .CLR is displayed, see below). Afterwards, the loader is being newly written to the Flash-ROM and the complete firmware has to be too.)

.CLR

- While downloading the firmware, the printer displays .CLR for a short while (approx. 2 s). Don't you dare to interrupt the loading process in this moment! The Flash-ROMs would have to be exchanged!



A downgrade of loader 3.0 to a lower version may only be performed when ATMEL Flash-ROMs are mounted.

- Proceed as described in paragraph [Identifying the Flash-ROMs](#) on page 10 to find out which type of Flash-ROM is mounted in your printer.

Updating the loader

The loader is being loaded in one batch file together with the firmware. Separate updating of the loader is therefore normally not necessary.

If, in any case, a separate loader update should be necessary, proceed as described in paragraph [Loading Firmware](#) on page 4 - using the following files instead (for version x.x):

Archiv file: V55LDRxx.EXE

Batch file: V55LDRxx.BAT

Identifying the Flash-ROMs

Proceed as follows to find out which Flash-ROM type is mounted in your printer:

1. Remove the rear hood of the printer.
 - Refer to paragraph „Housing“.
2. Remove the I/O stepper board.
 - Refer to paragraph „Boards“.
 - Continued next page
3. Remove the "ODD" or "EVEN" label from both Flash-ROMs respectively. The writing underneath designates the Flash-ROM type.

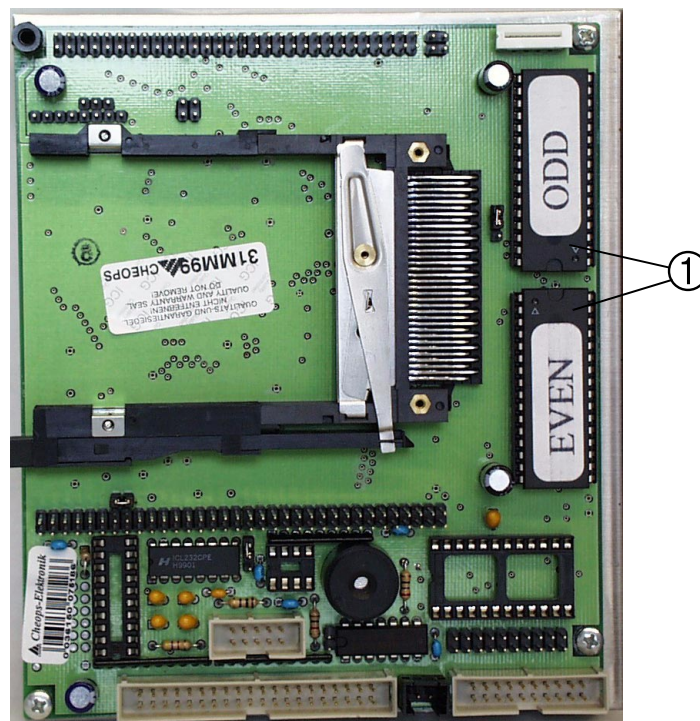


Fig. 5: CPU board with Flash-ROMs (1). Remove the „ODD“ or „EVEN“ label respectively, to get to the type designation.